

Listing and Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1-18. (cancelled)

1 19. (previously presented) A control device for extending an effective control
2 range of a first control device for controlling an IR controllable device, the control device
3 comprising:

4 a receiver for receiving from the first control device a first control signal having a
5 first data segment for control information; and

6 means for extracting an IR carrier frequency from the first control signal and
7 means for transmitting a RF signal having a second data segment for the control

8 information and the IR carrier frequency, wherein the RF signal is adapted to be
9 received by a second control device that converts the RF signal into an IR control signal
10 for controlling the IR controllable device, the IR control signal having an IR carrier with
11 the IR carrier frequency and having a data segment for the control information.

1 20. (previously presented) The control device of claim 19 wherein the IR carrier
2 frequency is included in the first data segment of the first control signal and the receiver
3 identifies the IR carrier frequency by extracting a portion of the first data segment
4 designating the IR carrier frequency.

1 21. (cancelled)

1 22. (previously presented) The control device of claim 20 wherein the portion of
2 the first data segment designating the IR carrier frequency is at least four bits long.

1 23. (previously presented) The control device of claim 19 wherein the first control
2 signal is an IR signal.

1 24. (previously presented) The control device of claim 23 wherein the first control
2 signal is transmitted with an IR carrier and the extracting means extracts the IR carrier
3 frequency by determining a frequency of the IR carrier.

1 25. (previously presented) The control device of claim 23 wherein the
2 transmitting means does not transmit the IR carrier.

1 26. (previously presented) The control device of claim 19 wherein the RF signal
2 is amplitude shift keying modulated.

1 27. (previously presented) The control device of claim 19 wherein the RF signal
2 can be received by a plurality of second control devices with respective controllable
3 devices.

1 28. (previously presented) The control device of claim 19 wherein the first control
2 device is disposed in a common housing with the control device.

1 29. (previously presented) The control device of claim 19 wherein a power supply
2 of a stage of the transmitting means is modulated by a version of the first control signal.

1 30. (previously presented) The control device of claim 29 wherein the power
2 supply is modulated by 100 percent signal output capability from the first control device.

1 31. (previously presented) The control device of claim 29 wherein the power
2 supply is modulated by less than 100 percent signal output capability from the first
3 control device.

1 32. (previously presented) The control device of claim 29 wherein the
2 transmitting means is overmodulated and has a duty cycle "on" time which is shorter
3 than an "off" time.

1 33. (previously presented) A control device for extending an effective control
2 range of a first control device for controlling an IR controllable device, the control device
3 comprising:

4 a RF receiver for receiving from the first control device a RF control signal having
5 a data segment for control information and an IR carrier frequency, wherein the IR
6 carrier frequency is extracted by the first control device from a received IR control signal
7 having the IR carrier frequency; and

8 an IR transmitter for transmitting a first IR control signal for controlling the IR
9 controllable device, the first IR control signal having a data segment for the control
10 information and having a carrier with the IR carrier frequency.

1 34. (previously presented) The control device of claim 33 wherein the RF control
2 signal corresponds to the received IR control signal.

1 35. (previously presented) A control device for extending an effective control
2 range of a first control device for controlling an IR controllable device, the control device
3 comprising:

4 a receiver for receiving from the first control device a first control signal having an
5 IR carrier frequency and having a data segment for control information, wherein the
6 receiver extracts the IR carrier frequency from the first control signal; and

7 an IR transmitter for receiving the extracted IR carrier frequency and transmitting
8 an IR control signal for controlling the IR controllable device, the IR control signal
9 having a data segment for the control information and having a carrier with the
10 extracted IR carrier frequency.

1 36. (previously presented) The control device of claim 35 wherein the first control
2 signal is an IR signal.

1 37. (previously presented) A control device for controlling an IR controllable
2 device, the control device comprising:

3 a transmitter for transmitting a first control signal having an IR carrier frequency
4 and a data segment for control information, wherein the first control signal is adapted to
5 be received by a second control device that extracts the IR carrier frequency and
6 produces an IR control signal having a data segment for the control information, and
7 having a carrier with the extracted IR carrier frequency.

1 38. (previously presented) The control device of claim 37 wherein the data
2 segment is at least four bits long.